Force measurement

Test set for chain hoists

WIKA

Smart in sensing

ICS SCHNEIDER MESSTECHNIK

Checking of electrical overload protection devices and friction clutches

For an efficient interaction of all components in modern industrial production, reliability and safety in the application play an important role. In this context, speed must not be at the expense of safety.

The focus is on the protection of personnel and the functional safety of plants and machinery, as well as the reduction of costs through minimal downtime and low outlay for maintenance and repair.

Strict safety regulations for hoists

In Europe, the requirements of the Machinery Directive apply, which is implemented in national regulations. Annual inspection intervals are prescribed here.

There are similar regulations outside Europe. For example, the Occupational Safety and Health Administration (OSHA) in the USA and the Japan Industrial Safety and Health Association (JISHA) in Japan have strict requirements for annual inspections.

Versatility, ease of use

The FRKPS chain hoist test set is suitable for force measurement on both friction clutches and electrical overload protection devices.

It includes a force transducer with chain adapters and an indication unit. The measuring spring is hooked into the chain with the adapters matching the chain and moved against the chain hoist as far as it will go. Either the friction clutch or the overload protection is then triggered, while the FRKPS documents the force progression.

This completes the test and eliminates the need for expensive test weights. If desired, the measured values can be stored in the hand-held indicator and transmitted to the PC to create an automatically generated test log.

High-quality components

To ensure the greatest possible insensitivity of the force transducer against parasitic forces and torques, the FRKPS features a shear beam force transducer.

The model FE630 battery-operated hand-held indicator evaluates the signals transmitted by the force transducer via a cable.
It is characterised by intuitive operation, a high sampling rate, 13 h battery runtime and a memory of 30 x 1,000,000 measuring points.
The stored values can be transmitted to the PC and analysed using the software included in the scope of delivery.

High user friendliness

For the testing, the force transducer is hooked into the chain, moves upwards with the chain against the bottom of the chain hoist and thereby blocks the chain. On the indication instrument, the magnitude of the force at which the friction clutch or the electrical overload protection responds is read off. If the measured values are saved, they can be used to subsequently create a test log on the PC.

Thanks to its high measurement accuracy, the FRKPS can be used for load ranges from 40 ... 3,500 kg with a deviation of less than 1 kg (relative linearity error 0.5 % F_{nom}).

SERVICES

EXCEEDING EXPECTATIONS

CALIBRATION

The force transducer and the hand-held indicator are calibrated together as a measuring chain.
We carry out the annual calibration quickly and reliably in WIKA's own calibration laboratory.

On the safe side with the FRKPS

The extensive accessories allow adaption to various chain sizes.

Scope of delivery:

- Force transducer
- Hand-held indicator
- Centring sleeves
- Chain adapter
- USB-C cable
- PC software
- Calibration report
- Operating instructions

The set is delivered in a modern case.

Three differently sized centring sleeves and two chain adapters for chain sizes of 3 x 9 ... 11 x 31 mm (in accordance with EN 818-2), a battery charger and a 5-metre signal cable make the chain hoist test set immediately and universally applicable. The AZK08 adapter set is available as an accessory for profile steel chains.

You can find further details online

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